

Chapter 1. Introduction

The US Route 1 Corridor at Marine Corps Base Quantico (MCB Quantico) project was initiated by Federal Highway Administration (FHWA) Eastern Federal Lands Highway Division (EFLHD) in June 2011 to identify transportation needs and assess potential improvements to the US Route 1 corridor in Stafford and Prince William Counties. This Preliminary Engineering Report services as a comprehensive summary of the project process which included:

- Analysis of existing traffic, safety, and environmental conditions
- Development and analysis of future transportation conditions including programmed improvements
- Preliminary screening and analysis of potential alternatives
- Detailed transportation and environmental assessment of a refined recommended alternative
- Preparation of conceptual design plans and graphical representation of the recommended alternative
- Outreach to and involvement with local jurisdictions, agencies, and the general public

This chapter provides an introduction to the project, detailing the study area, background and need, and the project objectives.

1.1 Study Area

Legally named Jefferson Davis Highway in Virginia, US Route 1 is of strategic importance to the Commonwealth. A principal arterial throughout its length, US Route 1 is important individually and as a part of the Interstate 95 (I-95) corridor. The US Route 1 corridor is one of two contiguous north/south routes in the eastern half of Virginia. It provides access to and mobility for large and small Virginia communities. It also supports the operation of I-95 by accommodating short- and moderate-distance trips, connecting interchanges, and providing capacity during interstate incidents. In southern Prince William County and northern Stafford County, US Route 1 is less than one-half mile from I-95 and connects to three significant interchanges: Exit 143 (Aquia/Garrisonville), Exit 148 (Quantico), and Exit 150 (Triangle/Quantico).

The section of US Route 1 under study is approximately 3.5 miles in length. The study section of US Route 1 extends from Joplin Road/Fuller Road in Prince William County to the northern intersection with Telegraph Road in Stafford County. The study corridor is shown in **Figure 1-1**.

1.2 Background and Need

US Route 1 has remained unchanged for decades in southern Prince William County and northern Stafford County. Meanwhile, population and employment have increased significantly in each county as well as in the surrounding metropolitan area. The following chart summarizes population growth in the last decade in Prince William and Stafford Counties.

Locality Name	2000	2010
Prince William County	281,287 persons	402,002 persons
Stafford County	92,446 persons	128,961 persons
<i>Source: U.S. Census 2000 and 2010</i>		

Responding to current and anticipated transportation needs along the US Route 1 corridor, FHWA EFLHD initiated a study with the cooperation of Prince William and Stafford Counties, the Virginia

Department of Transportation (VDOT), and MCB Quantico. The intent of the study is to identify transportation needs, develop concepts for improvement, and identify a preferred US Route 1 improvement plan for US Route 1 from Joplin Road/Fuller Road to Telegraph Road.

Traffic counts collected by VDOT in 2010 indicate that US Route 1 in the vicinity of Triangle, Virginia, is carrying 17,000 vehicles per day during normal traffic conditions. Creating further and more frequent stress on US Route 1, I-95 is increasingly congested during peak travel periods and during incidents, which leads to would-be I-95 travelers looking to US Route 1 as an alternative travel route. Based on traffic counts conducted by VDOT, I-95 was carrying 141,000 vehicles per day in 2010.

The physical configuration of US Route 1 in combination with growth in each of the counties has contributed to significant transportation issues along US Route 1 during peak weekday and weekend travel periods in the defined project study area. The combination of multiple morning and evening peak hours, attributed to different commuting patterns, creates long peak periods with different directional characteristics. On weekends, US Route 1 experiences significant congestion during the summer due to seasonal destinations north and south of the study area. During off-peak periods, US Route 1 is largely free of congestion.

1.3 Project Function

Capacity-enhancing modifications are needed along the US Route 1 corridor in southern Prince William County and northern Stafford County. Growth planned in each county, additional employees and missions that are programmed to be assigned to MCB Quantico (largely as a result of Base Realignment and Closure (BRAC) activities), and capacity limitations and existing congestion along I-95 necessitate that US Route 1 is improved to accommodate additional travel demand. Modifications to US Route 1 will need to occur within the context of the adopted plans (transportation and comprehensive) of each locality and be compatible with MCB Quantico long-term plans and requirements. The following describes the specific purpose of US Route 1 modifications in southern Prince William County and northern Stafford County:

- 1.** Support adopted local and regional plans by providing improvements to the US Route 1 corridor in southern Prince William and northern Stafford Counties:
 - Advance the recommendations, objectives, and policy identified in the adopted FAMPO 2035 Long-Range Transportation Plan (LRTP)
 - Support recommendations of the Prince William County Comprehensive Plan
 - Support recommendations of the Stafford County Comprehensive Plan
 - Support MCB Quantico plans and recommendations from BRAC commission reports
- 2.** Facilitate the movement of peak hour traffic flows to, from, and along US Route 1 in the study area, as well as assist in mitigating congestion due to incidents on I-95
- 3.** Reduce peak hour traffic congestion and its effects on adjacent facilities, especially queuing at MCB Quantico's Main Gate on Fuller Road, by making improvements at key locations along US Route 1 such as:
 - US Route 1 and Joplin Road/Fuller Road
 - US Route 1 and Russell Road
 - US Route 1 and Telegraph Road

4. Improve safety along US Route 1

- Reduce intersection congestion
- Provide adequate horizontal and vertical roadway geometry along US Route 1
- Provide separation between northbound and southbound travel lanes
- Better manage access to US Route 1
- Provide appropriate accommodations for bicyclists and pedestrians along and crossing US Route 1 and intersecting roadways

5. Support regional transportation demand management initiatives

- Provide accommodation for future priority transit services along US Route 1
- Provide facilities or future accommodation (right-of-way) for bicycle, pedestrian, and transit facilities

6. Support National Capital Region (NCR) evacuation plans, access to MCB Quantico for national security purposes, and access to major employment centers and areas for economic redevelopment**1.4 Coordinated Planning**

This corridor study is just one study in a large network of studies and plans that will impact the region. Multiple jurisdictions, agencies, and organizations are conducting transportation and land use plans to ensure the region is adequately prepared to handle the expected growth. This section highlights major plans that are directly related to US Route 1 in the study area. Specific programmed roadway improvements are discussed in detail in Chapter 4. A full summary of all plans reviewed can be found in the Appendix.

Stafford County Transportation Plan

- Widen US Route 1 from four to six lanes in the study area
- Recommends two new access points to Quantico Corporate Center (one to Telegraph Road and one to US Route 1)

Stafford County Boswell's Corner Redevelopment Plan

- Envisions the area surrounding US Route 1 from Telegraph Road to Corporate Center Drive as a center for commercial and residential growth
- Widen US Route 1 from four to six lanes in the study area with landscaped areas, sidewalks, and a multi-use trail

Prince William County Comprehensive Plan

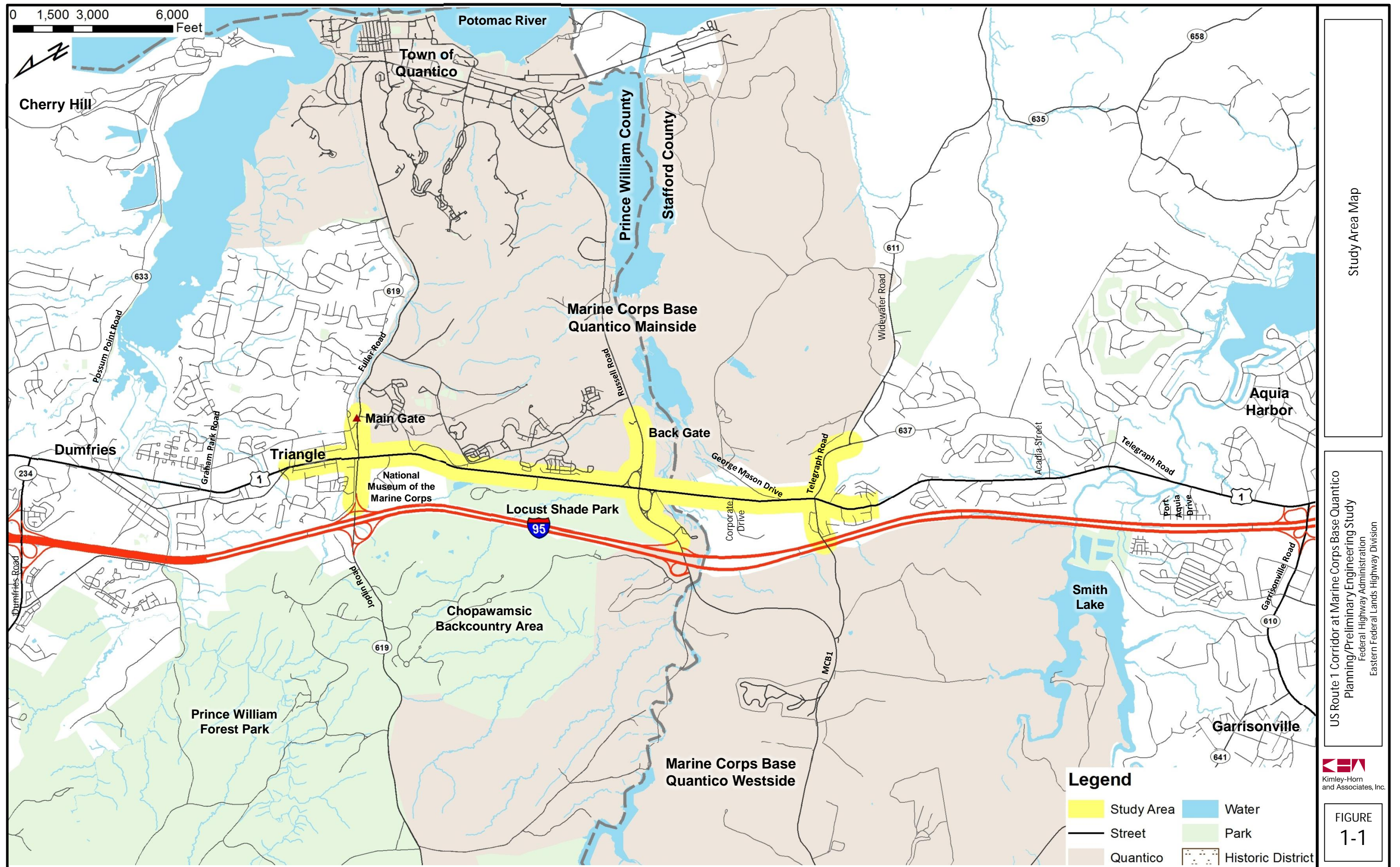
- Recommends widening of US Route 1 from four to six lanes in the study area

2035 George Washington Region/Fredericksburg Area Constrained LRTP

- Widen US Route 1 from four to six lanes in the study area
- I-95 Express Lanes Project – Construct two Express Lanes on I-95 parallel to US Route 1 corridor

Other corridor, land use, and transit studies and reports have been completed or are underway that relate to the corridor. Efforts were made to review the recommendations of completed study and coordinate with those that are ongoing. These include but are not limited to:

- MCB Quantico Growth Plan (MCB Quantico – Ongoing)
- Russell Road Traffic Operational Analysis Report (Defense Access Roads (DAR) Program – Ongoing)
- US Route 1 Bus Rapid Transit (BRT) Feasibility Study (Prince William County, Potomac and Rappahannock Transportation Commission (PRTC) – 2011)
- Environmental Assessment (EA) for the Heritage Center Parkway (United States Marine Corps Heritage Foundation – 2011)
- EA for the I-95 High Occupancy Toll (HOT) Lanes Project (United States Department of Transportation (USDOT) and VDOT – 2011)
- Traffic Impact Analysis: Quantico Corporate Center and Corporate Drive Extension (Quantico Business Center, LLC – 2011)
- I-95/I-395 BRT Study (VDOT – 2010)
- Final Environmental Impact Statement (FEIS): Development of the West Side of MCB Quantico (United States Marine Corps – 2008)
- US Route 1 Corridor Multimodal Corridor Study (George Washington Regional Commission (GWRC) – 2008)
- PRTC Long Range Bus Transit Plan (PRTC – 2007)
- US Route 1 Centerline Design Study (VDOT – 2004)
- US Route 1 Corridor Study (Fairfax and Prince William Counties – 1997)



Study Area Map

US Route 1 Corridor at Marine Corps Base Quantico
Planning/Preliminary Engineering Study
Federal Highway Administration
Eastern Federal Lands Highway Division

Kimley-Horn
and Associates, Inc.

FIGURE
1-1